

**CHAPTER 1**  
**GENERAL INFORMATION FOR HTRW PROJECTS**

<b><u>Paragraph</u></b>	<b><u>Title</u></b>	<b><u>Page</u></b>
1-1	INTRODUCTION	1-1
1-2	RESPONSIBILITY	1-1
1-3	REFERENCES	1-1
1-4	AUTHORITY	1-4
1-5	REAL ESTATE	1-5
1-6	CHEMICAL QUALITY CONTROL AND QUALITY ASSURANCE	1-6
1-7	HEALTH AND SAFETY REQUIREMENTS	1-8
1-8	ORDNANCE AND EXPLOSIVES REQUIREMENTS	1-9
1-9	WORK PLANS AND OTHER SUBMITTALS	1-9
1-10	HANDLING AND STORAGE OF MATERIALS	1-10
1-11	PROGRESS SCHEDULES	1-10
1-12	COMMUNITY RELATIONS PLAN	1-11
1-13	PERMITS	1-11
1-14	PRECONSTRUCTION CONFERENCE	1-11
1-15	QUALITY CONTROL DAILY REPORT	1-12
1-16	QUALITY ASSURANCE DAILY REPORT	1-12
1-17	SPILL REPORTING	1-12
1-18	PHOTOGRAPHS	1-12
1-19	CLAIMS	1-13
1-20	CLOSEOUT REPORTS AND RECORD DRAWINGS	1-13
1-21	OPERATION AND MAINTENANCE (O&M)	1-13
1-22	WARRANTIES	1-14
1-23	ACRONYMS	1-14

## **Chapter 1 GENERAL INFORMATION FOR HTRW PROJECTS**

1-1. **INTRODUCTION.** This document is a useful supplement to construction contract documents and provides detailed information on what a Quality Assurance (QA) Representative should be looking for during construction at Hazardous, Toxic and Radioactive Waste (HTRW) sites. The information provided is based on the Corps of Engineers guide specifications and the experience of Corps of Engineers designers and QA Representatives who have worked on HTRW sites. As a QA Representative, you must be thoroughly familiar with all the provisions of the contract documents, including amendments and submittals. These contract documents must be strictly enforced when administering the contract. If there are significant differences between the information provided in this document and the contract documents, contact your supervisor for guidance or clarification.

1-2. **RESPONSIBILITY.** The primary purpose of a QA Representative is to ensure that construction is carried out according to the plans and specifications. There are many unique requirements on HTRW projects which the QA Representative should be knowledgeable of, and ensure compliance with the following:

- a. Federal, state, and local environmental laws and regulations which pertain to the project. Multiple submittals dealing with protection of the environment are generally required on HTRW projects;

- b. Health and safety requirements for Government employees, contractors, and the public;

- c. Compliance with regulatory training requirements;

- d. Manifesting of contaminated materials;

- e. Requirements for chemical sampling and testing;

- f. Ensuring regulatory milestones are being met. Your supervisor should be notified of slips in the schedule so that the appropriate regulatory authorities can be notified in writing;

- g. Management of special contracts such as cost reimbursable type contracts;

- h. Monitoring of project funds due to lack of contingency funding on DERP projects and state contribution (cost sharing) for EPA lead projects;

- i. Community relations plans; and

- j. Procedures for site closeout.

1-3. **REFERENCES.**

Federal Regulations

-29 CFR 1926.65 - Hazardous Waste Operations and Emergency Response

-29 CFR 1910.120 - Hazardous Waste Operations and Emergency Response

EP 415-1-261  
15 Jul 97

-Federal Acquisition Regulation (FAR) 52.236-13

-Public Law 96-510, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, also known as Superfund

-Public Law 99-499, the Superfund Amendments and Reauthorization Act (SARA)

#### Engineering Regulations

-ER 385-1-92 - Safety and Occupational Health Document Requirements for HTRW Activities

-ER 1110-1-263 - Chemical Data Quality Management for Hazardous Waste Remedial Activities

#### Engineering Pamphlet

-EP 415-1-266 - Resident Engineer Management Guide

-EP 200-1-2 - Process and Procedures for RCRA Manifesting

#### Engineering Manuals

-EM 385-1-1 - Safety and Health Requirements Manual

-EM 200-1-1 - Validation of Analytical Chemistry Laboratories

-EM 200-1-2 - Technical Project Planning - Guidance for HTRW Data Quality Design

-EM 200-1-3 - Requirements for the Preparation of Sampling and Analysis Plans

-EM 1110-1-1804 - Geotechnical Investigations

-EM 1110-1-1906 - Soil Sampling

-EM 1110-1-4000 - Monitor Well Design, Installation, and Documentation at Hazardous and/or Toxic Waste Sites

-EM 1110-1-4001 - Soil Vapor Extraction and Bioventing

#### Corps of Engineers Guide Specifications

-CEGS 01110 - Safety, Health and Emergency Response

-CEGS 01450 - Contractor's Chemical Quality Control

#### Environmental Protection Agency References

-EPA/625/6-87/016 - Handbook-Ground Water

-EPA/600/R-93/182 - Quality Assurance and Quality Control for Waste Containment Facilities

-EPA/625/R-93/003a - Subsurface Characterization and Monitoring Techniques: A Desk Reference

-EPA/542/b-94/013 - Remedial Technologies Screening Matrix and Reference Guide

-EPA/530/SW-91/051 - Technical Guidance Document: Inspection Techniques for the Fabrication of Geomembrane Field Seams

American Society of Testing Materials

-ASTM D 422-63(1990) - Test Method for Particle-Size Analysis of Soils

-ASTM D 698-91 - Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup> (600 kN-m/m<sup>3</sup>))

-ASTM D 1140-92 - Test Method for Amount of Material in Soils Finer Than the No. 200 (75-um) Sieve

-ASTM D 1556-90 - Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method

-ASTM D 1586-84(1992) - Test Method for Penetration Test and Split-Barrel Sampling of Soils

-ASTM D 1785-94 - Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40,80, and 120

-ASTM D 2167-94 - Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method

-ASTM D 2216-90 - Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock

-ASTM D 2241-94 - Specification for Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series)

-ASTM D 2488-93 - Description and Identification of Soils (Visual-Manual Procedure)

-ASTM D 2922-91 - Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depths)

-ASTM D 3017-88(1993) - Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depths)

-ASTM D 3034-94 Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings

-ASTM D 4318-93 - Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils

-ASTM D 4643-93 - Test Method for Determination of Water (Moisture) Content of Soil by the Microwave Oven Method

-ASTM D 5084-90 - Measurement of Hydraulic Conductivity of Saturated Porous Material Using a Flexible Wall Permeameter

-ASTM D 5088-90 - Practice for Decontamination of Field Equipment Used at Non-Radioactive Waste Sites

-ASTM D 5092-90 - Recommended Practice for Design and Installation of Ground-Water Monitoring Wells in Aquifers

-ASTM D 5093-90 - Test Method for Field Measurement of Infiltration Rate Using a Double-Ring Infiltrometer with a Sealed Inner Ring

EP 415-1-261  
15 Jul 97

-ASTM D 5299-92 - Guide for Decommissioning of Ground Water Wells, Vadose Zone Monitoring Devices, Boreholes, and Other Devices for Environmental Activities

-ASTM D 5521-94 - Guide for Development of Ground-Water Monitoring Wells in Granular Aquifers

-ASTM D 5608-94 - Practice for Decontamination of Field Equipment Used at Low Level Radioactive Waste Sites

-ASTM D 5890-95 - Swell Index of Clay Mineral Component of Geosynthetic Clay Liners

-ASTM D 5891-95 - Fluid Loss of Clay Component of Geosynthetic Clay Liners

1-4. AUTHORITY. Make sure you know the extent and source of your authority. Failure to coordinate with the customer could jeopardize future work for the Corps of Engineers (USACE). There are several types of projects for which the USACE does HTRW construction oversight. The level of authority the QA Representative has varies depending on the type of project. The following paragraphs describe the types of projects for which the USACE has provided construction oversight.

a. Comprehensive Environmental Response, Compensation, and Liability Act. In February 1982, the USACE entered into an Interagency Agreement (IAG) with the Environmental Protection Agency (EPA) to provide assistance in executing Public Law 96-510, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, also known as Superfund. The Superfund legislation was amended in 1986 by Public Law 99-499, the Superfund Amendments and Reauthorization Act (SARA). Superfund projects are initiated by the EPA to clean up contamination which has resulted from past site activities. The level of oversight required on Superfund projects depends on the type of project and what requirements are established between the EPA and the USACE. These requirements then establish the basis for a site-specific IAG between the EPA and the USACE. All site-specific documents (IAG's, Consent Orders, etc...) should be carefully reviewed so that USACE personnel clearly understand the extent of their authority. Superfund projects are divided into Fund Lead projects and Enforcement Lead projects.

(1) Fund Lead Projects. Fund Lead projects use public funds (Superfund Trust Funds) to clean up hazardous waste sites. The USACE has been involved with the design and construction of many of these projects. During construction, the QA Representative will usually have similar authority to that exercised on standard USACE projects. Processing of payments under the Superfund program requires that special procedures be followed. Refer to EP 415-1-266 for specific details.

(2) Enforcement Lead Projects. Enforcement Lead Projects refer to projects where a Potentially Responsible Party (PRP) (private party or a Government agency) has accepted, through a consent decree, responsibility for cleaning up a hazardous waste site. The EPA has occasionally asked the USACE to do construction oversight for Enforcement or PRP Lead Projects. On this type of project, the USACE personnel usually only report construction deficiencies and safety violations to the EPA and do not have the authority to direct contractor activities. A prior agreement between USACE personnel and

the EPA Remedial Project Manager on how to handle imminent safety hazards should be in place for all Enforcement Lead Projects.

b. Defense Environmental Restoration Program (DERP). DERP was established in 1984 to evaluate and remediate contamination at Department of Defense sites. DERP is implemented subject to, and in a manner consistent with, CERCLA and SARA, however, environmental restoration under this program is not limited to those activities legally required by CERCLA. DERP projects are separated into two categories: Installation Restoration Program (IRP) and Formerly Used Defense Sites (FUDS). IRP work is done at active military bases while FUDS work is performed at sites formerly used by the military where contamination resulted from military activities. The level of authority that a QA Representative has on DERP projects will usually be similar to that exercised on standard USACE construction projects.

c. Base Realignment and Closure (BRAC) Program. The BRAC program requires closure and subsequent disposal of designated Department of Defense installations. Environmental restoration is required at many BRAC sites and the USACE is involved in many of these environmental restoration projects. The level of authority that a QA Representative has, varies from project to project and, should be defined prior to the start of construction.

d. Civil Works Projects. HTRW projects also exist on properties owned, or operated and maintained by USACE-Civil Works. The level of authority the QA Representative has varies from project to project and should be defined prior to the start of construction.

e. Environmental Support for Others (ESFO). The USACE, upon request, provides environmental restoration support for other Government agencies such as the Department of Energy, the General Services Administration, and the Federal Aviation Administration, etc. The level of authority the QA Representative has varies from project to project and should be defined prior to the start of construction.

1-5. REAL ESTATE. Land not owned by the Government is often required for support zones, decontamination facilities or other construction purposes. There are a number of methods for obtaining access to, and the use of, such lands. These methods include the use of a right-of-entry, a lease, a negotiated purchase, or a condemnation of an interest in the property, if it is either privately owned or owned by a non-Federal Governmental entity. A permit may be required if the land is controlled by another Federal agency. A Real Estate Planning Report (REPR) is typically prepared during the design phase of HTRW projects which determines how access to such lands will be obtained. The Contracting Officer's Representative (COR) should verify that access to the construction site has been obtained prior to advertisement of a construction project in accordance with the REPR or other planning documents. QA Representatives should:

a. Know the boundary of Government-owned, leased or controlled property;

b. Ensure that construction contractors do not trespass upon property located outside the boundaries of the construction site; and

c. Notify your supervisor if access to additional property is required to accomplish the construction of the project.

d. On long-term projects, be aware of the termination dates of any rights-of-entry, leases, or temporary easements and notify your supervisor in sufficient time to allow for their extension if access is required beyond such dates.

1-6. CHEMICAL QUALITY CONTROL AND QUALITY ASSURANCE. A unique aspect of most HTRW projects is the additional responsibilities of both the contractor and the QA Representative with respect to ensuring the quality of sampling and chemical data. ER 1110-1-263, Chemical Data Quality Management for Hazardous Waste Remedial Activities prescribes chemical data quality management responsibilities and procedures for chemical sampling, handling, and testing to assure analytical data obtained is of sufficient quality to meet the intended needs of a project. It should be noted that the latest revision of ER 1110-1-263, promotes enhanced flexibility for QA activities for chemical data quality management for HTRW projects. The project management team, including technical support staff, determines the appropriate level of compliance monitoring. This determination is made based upon the intended use of the analytical results and the degree of confidence needed in the quality of the results. The required level of compliance monitoring is established using the Data Quality Objectives (DQO) process (see EM 200-1-2) and should be summarized in the Sampling and Analysis Plan (SAP). Compliance monitoring may consist of a combination of activities including: validation of laboratories; sample shipment inspections by the QA laboratory; field and/or laboratory QC and QA sample analysis; laboratory analysis of double-blind performance evaluation samples; validation of laboratory data using USEPA regional or national functional guidelines; validation of data using project-specific guidelines; and the evaluation of laboratory data using comparisons of field sample, QC sample, and QA sample analysis results.

a. Chemical Data Quality Management (CDQM). A specification section which covers chemical data quality management (usually Section 01450) should exist in every set of plans and specifications for HTRW and UST projects where environmental, process control, or waste samples will be collected and analyzed. The document should be reviewed as part of the Biddability, Constructibility, Operability and Environmental (BCOE) Review so that the QA Representative becomes familiar with the CDQM requirements. This specification will outline a detailed plan, and related data quality objectives, for collecting and analyzing samples from all media. The specification will address all chemistry testing, including field screening and definitive field analysis using standard and modified protocols.

b. Sampling and Analysis Plan (SAP). The contractor is required to prepare and submit a SAP for acceptance prior to commencement of sampling activities. A SAP is comprised of a Field Sampling Plan (FSP) and a Quality Assurance Project Plan (QAPP). Chemical measurements for the initial phases of the contract may be allowed by the COR through an Interim Sampling and Analysis Plan (ISAP) in accordance with CEGS 01450. The following paragraphs provide definitions of the plans referenced above.

(1) SAP - A submittal comprised of the FSP and QAPP. The SAP is used to define all aspects of the project sampling and analytical work to be done.

(2) FSP - That portion of the SAP which defines the field activities. It includes all requirements for sampling, field documentation, onsite chemical analysis, sample packaging, etc.

(3) QAPP - The portion of the SAP which defines the laboratory analytical and chemical data reporting requirements.

c. Chemical Data Quality Control Plan (CDQCP). The contractor is also required to prepare and submit a CDQCP for acceptance prior to the initiation of related site activities. The purpose of this plan, distinct from the SAP, is to propose the chemical data quality control (QC) system, staff, and qualifications that will be utilized to carry out the CDQM specification.

d. HTRW Chemistry Laboratories. Each HTRW construction project involving chemical sampling and analysis may require the utilization of a HTRW Chemistry Laboratory for QA program support. If split samples are to be generated for the project, support provided by the designated QA Laboratory would include inspection of split sample shipments, analysis of split samples, and preparation of a Chemical Quality Assurance Report.

e. Review of contractor CDQM Submittals. Assistance in review of contractor submittals related to CDQM are to be made available from the designated HTRW design district, the HTRW Chemistry Laboratory (assigned QA lab) or the HTRW CX. It is the responsibility of the HTRW design district or the HTRW Chemistry Laboratory to arrange for HTRW CX review support if necessary.

f. Contractor Reports. Contractor reports include Daily Chemical Quality Control Reports and Chemical Quality Control Summary Reports. Chemical Data Interim Reports can be utilized for long term projects in order to aid the HTRW Chemistry Laboratories in producing split sample comparative data for Chemical Quality Assurance Reports. The CDQM specification should detail requirements for the timing of interim data reports.

g. Chemical Quality Assurance Report (CQAR). As part of the data evaluation process, the designated QA laboratory may provide a single or multiple CQARs to the Technical Manager. In general, this report will provide an evaluation related to each split sample shipment with regard to the status of sample integrity (i.e., appropriate sample packaging and preservation) as well as an evaluation of internal QC for the contractor's data set and the comparison of referee sample and primary sample data. Data discrepancies will be noted in the report which will aid the QA Representative in making judgements relative to measurement and payment or potential resampling. When required, the CQAR should be made available within a maximum of 30 days of the contractor's data being reported to the QA Laboratory.

h. Laboratory Validation. Laboratories providing sample analyses utilizing standard environmental analytical methods should be validated by CEMRO-HX-C in accordance with EM 200-1-1. For laboratories which have never been validated for USACE HTRW projects, 12 to 16 weeks should be allowed for this process to be completed.

i. Guidance. The basic requirements for the USACE CDQM program are detailed in ER 1110-1-263, Chemical Data Quality Management for Hazardous, Toxic, and Radioactive Waste Remedial Activities. Related USACE guidance includes, EM 200-1-1, Validation of Analytical Chemistry Laboratories, EM 200-1-2, Technical Project Planning - Guidance for HTRW Data Quality Design, EM 200-1-3, Requirements for the Preparation of Sampling and Analysis Plans, and Corps of Engineers Guide Specification 01450, Chemical Data Quality Control.



1-7. HEALTH AND SAFETY REQUIREMENTS.

a. General. A specification section which covers safety, health, and emergency response (usually Section 01110 from CECS 01110 - "Safety Health & Emergency Response (HTRW/UST)") should exist in every set of plans and specifications for HTRW and underground storage tank (UST) projects. This section should be reviewed as part of the Biddability, Constructibility, Operability, and Environmental (BCOE) Review so that the QA Representative becomes familiar with the health and safety requirements. The specification should identify minimum initial health and safety requirements (for personal protective equipment (PPE), training, decontamination, air monitoring, etc.) that the contractor must address in the Site Safety and Health Plan (SSHP).

b. Pre-Bid Site Inspections/Visits. All prospective bidders entering contaminated areas of the site, or who will handle samples, soil/core borings, etc. should develop their own abbreviated SSHP for the site inspection activities. Any site visits by prospective bidders into contaminated areas should require the following (Refer to EP 415-1-266, Section 3, for more details):

- (1) Compliance with the abbreviated SSHP for the site visit;
- (2) Presentation of minimum documentation of compliance with training and medical surveillance requirements of OSHA, 29 CFR 1910.120/ 29 CFR 1926.65; and

- (3) Signing of a "hold-harmless"-type liability waiver statement (consult District Counsel for wording).

- (4) Site visit announcements should specify if prospective bidders must provide their own appropriate PPE in accordance with their abbreviated SSHP. Disposable PPE may be the most appropriate, if an accessible means of collecting and disposing of the PPE is in place at the site. Otherwise, some form of decontamination facility is required.

c. Notice-To-Proceed. Frequently, a phased Notice-To-Proceed, (NTP), is issued where the contractor may work on submittals or perform non-intrusive site activities in the support zone or clean areas of the site pending acceptance of the SSHP and approval of the CDQCP and SAP.

d. Site Safety and Health Plan (SSHP). The contractor is required to prepare and submit a SSHP for acceptance prior to commencement of on-site activities. A SSHP is the contractor's site-specific plan to comply with OSHA Standard 29 CFR 1926.65 - "Hazardous Waste Operations and Emergency Response" (the OSHA construction standard version of 29 CFR 1910.120). Specific HTRW requirements are identified in EM 385-1-1 - "Safety and Health Requirements Manual" and ER 385-1-92 - "Safety and Occupational Health Document Requirements for HTRW Activities." CECS 01110 and ER 385-1-92 specify that the Federal Acquisition Regulation (FAR) 52.236-13 for a separate Accident Prevention Plan (APP) shall be considered met if the contractor integrates the components of the APP, including activity hazard analyses, into the SSHP submission. ER 385-1-92 requires the field office to utilize the industrial hygiene/safety professionals in their geographic district's Safety and Occupational Health Office (SOHO) to review and recommend acceptance of the contractor's SSHP to the COR. Acceptance of the SSHP by the COR is usually given to the contractor by official

letter, and is subject to satisfactory implementation by the contractor. While it is the Government's responsibility to monitor implementation of the SSHP, including activity hazard analyses, acceptance of the SSHP by signing or initialing the documents should not be performed. The SSHP is the contractor's plan, and the contractor retains the responsibility for its content and implementation at the site.

e. Site Safety and Health Plan Modifications. Once the SSHP is accepted, it becomes an enforceable contract document. The SSHP can be modified by the prime contractor's Site Safety and Health Officer (SSHO) and the certified industrial hygienist (CIH), with concurrence of the QA Representative, at any time. If there are questions on any modifications, the QA Representative should consult with the geographic district Safety and Occupational Health Office (SOHO) and/or the design district to receive recommendations for concurrence.

f. Daily Inspections. The SSHO's daily inspection logs should be attached to and submitted with the Daily Quality Control Reports.

1-8. ORDNANCE AND EXPLOSIVES (OE) REQUIREMENTS. If you encounter or suspect the presence of OE on your site, you must immediately stop the work and request assistance and advice from your district. Personnel involved in activities where OE may be present must receive training on ordnance recognition and safety. Assistance from the OE Design District and the OE Center of Expertise(CX) is mandatory to ensure safe operations. If OE is present at the site, the following questions should be asked:

- a. Is there a site safety plan approved by the OE CX?
- b. Are construction personnel with the proper training and qualifications on site to provide QA and oversight activities?

1-9. WORK PLANS AND OTHER SUBMITTALS. HTRW projects have many unique submittal requirements which are in addition to those required for non-HTRW projects. The following is a list of some of the HTRW specific submittal requirements:

- a. Plan of Operations;
- b. Remedial Action Plan;
- c. Closure Plan;
- d. Materials Handling Plan;
- e. Chemical Sampling and Testing Plans (SAP and CDQCP);
- f. Manifesting and other Regulatory Compliance Procedures;
- g. Spill Prevention Control and Countermeasures Plan;
- h. Dust, Vapor, and Odor Control Plan; and
- i. Storm Water Pollution Prevention Plan.

The actual submittal list will be developed by the contractor and USACE on ENG Form 4288-R. Submittals may or may not have the actual

titles listed above and some subjects may be combined and others separated. Some submittals may require review and approval from Federal, state or local regulators as well as several offices and laboratories within the USACE. Subsequent chapters of this document will describe submittal requirements for specific processes and technologies. The QA Representative should be aware of submittal approval requirements, i.e., whether or not submittal is required by:

(1) Other districts, divisions, or laboratories within the USACE; or

(2) Government agencies outside of the USACE.

#### 1-10 HANDLING AND STORAGE OF MATERIALS.

a. Materials Handling Plan (MHP). A MHP describes procedures for the safe handling of contaminated liquids and solids. The plan describes off-site transportation and disposal of materials, manifesting requirements, and chain-of-custody procedures. A MHP may also discuss imported fill materials, truck routes to be used, traffic safety plans, and special road permits (if required).

b. Manifesting Requirements. USACE personnel involved with on-site management and manifesting of hazardous material must complete specialized training. USACE policy and guidance on hazardous material manifests and shipping has been issued under the following references:

(1) EP 200-1-2, "Process and Procedures for RCRA Manifesting". This document summarizes the training requirements and procedures for manifesting hazardous materials;

(2) Construction Bulletin No. 96-9, 13 Mar 96, Subject: Hazardous Waste Manifest Signature Policy and Procedures;

(3) CEMP-RT memorandum dated 30 April 93, Subject: Signatory Responsibility for Hazardous Waste Manifests and Related Documents - Policy Guidance;

(4) EP 415-1-266 Resident Engineer Management Guide for HTRW Projects; and

(5) PROSPECT Course - Hazardous Waste Management and Manifesting, Course Control Number 223 and Department of Transportation (DOT) Refresher Training and Certification, Course Control Number 429.

c. Treatment Storage and Disposal Facility (TSDF). The plans and specifications should provide criteria for selection and approval of an off-site TSDF. The facility selected may require pre-approval by the USACE and/or the EPA.

#### 1-11. PROGRESS SCHEDULES. The following items should be considered when reviewing the progress schedule.

a. Delays are possible due to regulatory review. Verify that sufficient time for regulatory review has been incorporated into the schedule.

b. Ensure that the schedule includes sample analysis turnaround

time, especially if sample results (such as background air or water monitoring) are required before a specific phase of work can begin.

c. Consider how the schedule will be affected if items such as the SAP must be submitted more than once prior to approval.

1-12. COMMUNITY RELATIONS PLAN. A community relations plan is required on all CERCLA projects. AR 200-1 Environmental Protection and Enhancement requires a community relations plan for all IRP and FUDS properties that have sites included or proposed for inclusion on the National Priorities List. Typically, QA representatives will only provide a support role to EPA and will not become the lead in community relations activities at CERCLA Sites. However, due to their full-time on-site presence, QA Representatives are often faced with being the first point of contact for concerned citizens, media representatives, etc.

a. The QA Representative should review the community relations plan.

b. The QA Representative should be familiar with those who are charged with responding to citizens and media inquiries, and should regularly consult with these people.

1-13. PERMITS. The contractor is often required by the specifications to obtain construction permits (building and electrical permits, etc.) for various on-site activities. For on-site activities under CERCLA, Federal, state, and local permits are not required. However, the Government and its contractors must comply with the substantive requirements of all Applicable or Relevant and Appropriate Requirements (ARARs) (Federal, state, and local laws) identified in the Record of Decision (ROD)/Enforcement Decision Document (EDD).

a. Do the plans and specifications identify permit requirements and who is responsible for obtaining each?

b. Has the Government and/or contractor obtained the permits for which each is responsible?

c. Are there any fees or prequalification requirements.

d. Have all installation permits (digging, electrical, etc...) been obtained.

1-14. PRECONSTRUCTION CONFERENCE.

a. Ensure appropriate USACE personnel, along with the installation, EPA (including the Potentially Responsible Party(s), if applicable), state, and local officials, are invited to the preconstruction conference.

b. In some instances representatives from the QA laboratory, the designated HTRW design district, and/or the HTRW CX should attend the conference.

c. Multiple preconstruction meetings may be required due to the complexity of some HTRW projects.

d. The QA Representative will be responsible for assisting the COR in setting the agenda and conducting preconstruction conferences.

1-15. QUALITY CONTROL DAILY REPORT. Quality Control Daily Reports are broader in scope for HTRW sites because of issues related to health and safety, regulatory requirements, and chemical sampling and analysis. The following are items commonly submitted in Quality Control Daily Reports for HTRW sites:

- a. Daily health and safety report;
- b. Calibration data and certification of testing equipment; and
- c. Qualifications of personnel performing testing and monitoring.

If chemical sampling and analyses are included in a report, The QA Representative should submit copies to the QA laboratory.

1-16. QUALITY ASSURANCE DAILY REPORT. The primary focus of QA reports is to document the QA tasks which have been performed. QA reports are also important for supporting construction costs for contracts which contain unit price items, and for cost-reimbursable contracts such as Total Environmental Restoration Contracts (TERC). Daily reports need to be accurate to support audits and prevent double billing.

1-17. SPILL REPORTING. There are many different environmental regulations that require spill reporting and notification of regulatory agencies. Since the USACE does work for many different customers, the person or agency responsible for reporting spills may vary depending upon the project. In all cases, USACE employees must report spills as required by statute and regulation. Just notifying the customer does not relieve the USACE or contractor personnel of liability. Guidance on complying with spill reporting regulations is provided in the Headquarters Memorandum entitled "Spill Reporting Procedures for USACE Personnel Involved in HTRW Projects" dated 20 July 1995.

- a. Are you familiar with the spill reporting requirements for the project?
- b. It is recommended that QA Representative consult with the Office of Counsel regarding spill reporting requirements prior to undertaking management of a project.
- c. Verify the contract specifications contain a section which outlines contractor responsibilities regarding spill reporting requirements.

1-18. PHOTOGRAPHS. Photographs and videos are taken to document site conditions and activities. Remotely located video cameras (including time-lapse surveillance) are often used to allow the QA Representative to inspect construction activities without putting on protective equipment and physically visiting the construction site.

- a. Site conditions prior to the start of site activities should be documented with photographs or video tapes. Aerial photographs

can also be valuable in documenting preconstruction site conditions. Make frequent checks of video cameras to ensure they are operable and positioned correctly.

b. Photographs or videos of existing roads used as haul routes should be taken prior to the start of construction to help document potential damage resulting from construction traffic.

c. Photographs or videos should document each phase of construction, equipment used, and construction techniques.

d. Dates and activities shown on photographs and videos should be well documented.

1-19. CLAIMS. There are many opportunities for the contractor to make claims against the Government on HTRW projects because it is often difficult to characterize the nature and extent of contamination during design.

a. Differing site conditions should be immediately documented and reported to your supervisor.

b. Time spent by contractors due to differing site conditions or regulatory changes should be carefully documented.

c. Determine if additional testing is required to verify differing site conditions.

d. Actual quantities often exceed estimated quantities on HTRW sites. Carefully document actual quantities.

1-20. CLOSEOUT REPORTS AND RECORD DRAWINGS.

a. There are additional record keeping requirements for HTRW projects. Record drawings are required for things such as monitoring well installation, geomembrane panel layout, and sampling locations. Subsequent chapters will provide more detail on requirements for record drawings.

b. Closeout reports are required for EPA projects. Closeout reports are also required by most states for UST removals.

c. States and other agencies often have requirements for submission of record drawings, analytical data, and other information.

1-21. OPERATION AND MAINTENANCE (O&M). Specific O&M requirements are covered in subsequent chapters of the document. The specifications should be reviewed to determine what permits are required for O&M of the facility.

a. Confirm the requirements for startup, O&M, and transition of the facility to the follow-on agency/operator are detailed in the contract specifications.

b. Check requirements for spare parts, replenishment of chemicals, etc. at the time of project transfer.

c. Operating permits may take considerable effort and time to

obtain. Have required operating permits been obtained by the Government or contractor?

d. Have applicable project files been transferred from the construction contractor to the operation and maintenance agency/contractor.

1-22. WARRANTIES. Make sure you are clear about when warranties begin. Warranties generally begin at project acceptance and not with completion of the O&M phase. In fact, these periods are both typically one year in length so both would expire at the same time, and just as the project is being transferred. Careful BCOE review and coordination is necessary to ensure that both the O&M and warranty provisions are acceptable to the end user of the facility.

1-23. ACRONYMS. The following is a list of acronyms used in this document:

<u>Acronym</u>	<u>Definition</u>
APP	Accident Prevention Plan
ARAR	Applicable or Relevant and Appropriate Requirement
ASTM	American Society for Testing and Materials
BCOE	Biddability, Constructibility, Operability and Environmental
BRAC	Base Realignment and Closure
CDQCP	Chemical Data Quality Control Plan
CDQM	Chemical Data Quality Management
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CIH	Certified Industrial Hygienist
COR	Contracting Officer's Representative
CQAR	Chemical Quality Assurance Report
CX	Center of Expertise
DERP	Defense Environmental Restoration Program
DO	Dissolved Oxygen
DOT	Department of Transportation
DQO	Data Quality Objectives
EDD	Enforcement Decision Document
EPA	Environmental Protection Agency
ESFO	Environmental Support for Others
FAR	Federal Acquisition Register
FSP	Field Sampling Plan
FUDS	Formerly Used Defense Sites
GAC	Granular Activated Carbon
GCL	Geosynthetic Clay Liners
HDPE	High Density Polyethylene
HTRW	Hazardous, Toxic and Radioactive Waste
IAG	Interagency Agreement
IRP	Installation Restoration Program
ISAP	Interim Sampling and Analysis Plan
MHP	Materials Handling Plan
O&M	Operation and Maintenance
OE	Ordnance and Explosives
ORP	Oxidation-Reduction Potential
OSHA	Occupational, Safety and Health Administration
PPE	Personal Protective Equipment
PVC	Polyvinyl Chloride

QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
REPR	Real Estate Planning Report
ROD	Record of Decision
SAP	Sampling Analysis Plan
SARA	Superfund Amendments and Reauthorization Act
SCADA	Supervision Control and Data Acquisition
SDRI	Sealed Double Ring Infiltrometer
SSHO	Site Safety and Health Officer
SSHP	Site Safety and Health Plan
VFPE	Very Flexible Polyethylene